American Dynamics

From Tyco Security Products

Release Notes

Illustra 625 PTZ Camera

Firmware Version	Product Data
1.0.2 (1.0.2.A491AA929)	Visit the IP Cameras section of our web site – www.americandynamics.net – to download datasheets and other documentation in PDF format.

September, 2013

Note
In case of discrepancy, the information in this document supersedes the information in any document referenced herein.

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What's in This Release

Introduction

This document contains a summary of the key features and known limitations of Illustra 625 PTZ Camera (i625PTZ) firmware release 1.0.2. This is the new firmware release for the new Illustra 625 PTZ camera.

This firmware release adds support for the optional Illustra 625 PTZ Feature Plus functionality consisting of audio, external alarms and SD card event buffering. In order to utilize these features a camera with additional feature plus hardware is required.

For detailed information on Illustra 625 PTZ, including guidance on installation and operation, refer to the 8200-0999-06 i625PTZ Configuration and User Guide.

Overview

The Illustra 625 PTZ Camera is a Pan Tilt Zoom (PTZ) speed dome high definition camera utilizing the latest in IP technologies. It offers full HD resolution video streams using H.264 or MJPEG codecs at up to 30ips.

A built-in web server allows you to configure the dome and stream video using Internet Explorer version 8 and higher. The dome can operate as a standalone camera on a network however it is intended to be integrated into sophisticated security solutions.

The i625PTZ is compatible with American Dynamics Video Edge NVR, and Video Edge Hybrid DVR integrating using Illustra API v3.0 (iAPI v3.0). This creates an integrated environment that allows you to access and control video remotely over a network, whether your surveillance system is small or large. The combined user interfaces allows for camera configuration and operation via American Dynamics victor Unified Client including direct access to the camera for advanced settings, direct web connect to the Network Video Recorder, and access via browser to the camera where needed for configuration. The i625 PTZ can also integrate with other network video recording systems using iAPI v3.0.

The i625PTZ is a Network Video Transmitter (NVT) compliant with ONVIF 2.2 Profile S standards and can interface with network video clients supporting ONVIF.

The additional Feature Plus functionality supported in this firmware release consists of audio support utilizing audio in/audio out connections, one output alarm, four external dry contact alarm connections and SD card buffering. The camera may be configured to record up to 20s (10s pre- and 10s post-event) to an SD card upon the triggering of one of the dry contact alarms. These video clips may be sent via FTP to an external FTP server for analysis.

The i625PTZ Dome is available in the following configurations:

I625PTZ Model Description	Product Codes
Illustra 625 PTZ, 1080p, 20x indoor, no bubble, non-vandal, black	ADCi625-P132
Illustra 625 PTZ, 1080p, 20x indoor, Feature Plus, no bubble, non-vandal, black	ADCi625-P232

Illustra 625 PTZ, outdoor, Feature Plus, clear, non-vandal, white	ADCi625-P222
Illustra 625 PTZ, outdoor, Feature Plus, clear, vandal, white	ADCi625-P221
Illustra 625 PTZ, outdoor, Feature Plus, smoked, vandal, white	ADCi625-P223
Illustra 625 PTZ, outdoor, Feature Plus, smoked, non-vandal, white	ADCi625-P224
Illustra 625 PTZ, outdoor, clear, vandal, white	ADCi625-P121
Illustra 625 PTZ, outdoor, clear, non-vandal, white	ADCi625-P122
Illustra 625 PTZ, outdoor, smoked, vandal, white	ADCi625-P123
Illustra 625 PTZ, outdoor, smoked, non-vandal, white	ADCi625-P124

Firmware Upgrade

The Illustra 625 PTZ Camera can be upgraded via the camera web GUI or by using Illustra Connect.

Upgrade Camera Firmware via the Web GUI

Note:
All existing camera settings are maintained when the firmware is upgraded.

Procedure: Upgrade Camera Firmware via the Web GUI

1. Using Internet Explorer connect to the camera via the IP Address and login to the Web GUI.
2. Select **Setup** from the web banner to access the setup menus.
3. Select **Maintenance** from the **Networking** menu.
4. Select the **Camera Upgrade** tab. The Camera Upgrade tab displays.
5. Select **Browse**. The Choose file dialog will be displayed.
6. Navigate to the location where the firmware file has been saved. Select the firmware file then select the **Open** button.
7. Select **Upload**. The file transfer will begin and a progress bar will be displayed.

Upgrade Camera Firmware via Illustra Connect

Note:
All existing camera settings are maintained when the firmware is upgraded.

Procedure: Update Camera Firmware via Illustra Connect

1. Install and launch the Illustra Connect software utility
2. From the displayed list of cameras; right-click on the camera requiring the software upgrade.
3. Select Upgrade Firmware. The Firmware Upload window will display.
4. Select **Choose File** and browse to the firmware upgrade file.
5. Select **Upgrade** to start the upgrade.

Features

Key Features

- 2 MP with dual streams at 1080p 30ips resolution
- Integration with American Dynamics VideoEdge NVR, VideoEdge Hybrid, victor Unified Client and HDVR v2.1 & 2.2 (Feature Plus supported on HDVR 2.2 onwards).
- Illustra API v3.0
- Illustra Connect v1.1.0
- ONVIF 2.2 profile S compliant
- Smooth and accurate PTZ motion control
- Low Latency
- Ultra high speed pan and tilt at 512° per second
- Real Time Continuous Auto-focus and Auto-iris
- Outstanding color reproduction
- Sleek and compact design
- Easy to install
- Progressive scan imager with full digital path to output
- 20x optical zoom provides 662 horizontal pixels per degree
- True Day / Night with Slow Shutter Technology
- Wide Dynamic Range
- Auto & Manual White Balance Modes
- Eventing with RTP meta-data streaming
- Frame noise reduction
- Audio support Audio In/ Audio Out (requires Feature Plus Model)
- Four External dry contact alarm points and one output alarm (requires Feature Plus Model)
- SD card event buffering(requires Feature Plus Model and micro-SD card)

Specific Feature Information

New Features

Firmware backward Compatibility

This firmware update is not backwards compatible. Once the firmware version 1.0.2 has been installed it will not be possible to downgrade to firmware version 1.0.0 or 1.0.1.

Audio

Audio codec supported is G711u at 8kHz

Alarms

4 external dry contact alarm points are supported in the camera

MicroSD Card

A MicroSD card pre-formatted with FAT32 to a maximum size of 32GB is supported

Video Streaming

Illustra 625 PTZ supports H.264 and MJPEG codec with resolution of up to 1920x1080 and 30ips.

- *Codecs supported:*
  H.264 (High Profile) or MJPEG
- *Resolutions supported:*
  1920x1080,1600x900,1280x720,1024x576,960x540,800x450,640x360,480x270,320x180 or 160x90
- *MJPEG Quality:*
  1 to 100
- *H.264 VBR Quality:*
  5 pre-defined quality presets for VBR: Highest, High, Medium, Low and Lowest
  Available through the Web GUI or iAPI.
- *H.264 CBR target bit rate:*
  18kbs to 10000kbps
- *Frame rate:*
  1 to 30 ips

Stream sharing

The i625ptz camera will intelligently duplicate an existing video stream to multiple clients requesting the same stream settings. A maximum of 4 streams is supported. The 4 clients can use any combination of the 2 independent streams described above.

The Web GUI shares Illustra API Stream #1 that is used by the American Dynamics VideoEdge NVR and the VideoEdge Hybrid.

Note:

The Illustra 625PTZ processing power is demonstrated in its encoding capability. The system can encode any two combination of H.264 and or MJPEG (1080P/30 or lower resolution) surpassing other cameras in the market.

4 streams total, 2 unique streams. Any combination i.e.:

- Stream #1 : 2 clients + Stream #2: 2 clients
- Stream #1 : 1 client + Stream #2: 3 clients
- Stream #1 : 3 clients + Stream #2: 1 client
- Stream #1 : 4 clients

MJPEG usage consideration

MJPEG video does not use any temporal compression but only use spatial compression making its bandwidth requirements much greater than H264.

General recommendations:

- Maximum possible Quality setting: 100
- Recommended Maximum setting: 90
- Recommended High Quality Setting: 75
- Recommended Medium Quality Setting: 55

The following Quality settings are recommended to optimize bandwidth utilization when using MJPEG spatial compression at high resolution:

Resolution	FPS	Recommended Maximum Quality
1920x1080	30	60
1920x1080	15	70
1920x1080	7	80
1600x900	30	65
1600x900	15	75
1600x900	7	85
1280x720	30	70
1280x720	15	80
1280x720	7	90

Note:

The MJPEG quality settings will also affect the quality of audio when associated with MJPEG.

Multicast

Illustra 625 PTZ supports multicasting of video. The i625PTZ supports RTSP multicast as per RFC2326 and continuous multicasting of RTP data via ONVIF media service configuration and StartMulticastStreaming and StopMulticastStreaming.

American Dynamics VideoEdge NVR/VideoEdge Hybrid DVR Integration

Illustra 625 PTZ integrates with the following versions of American Dynamics VideoEdge NVR and the VideoEdge Hybrid.

Illustra 625 PTZ Camera

- American Dynamics VideoEdge NVR/ VideoEdge Hybrid version 4.2.1 with camera pack 4.2.1.1028.
- American Dynamics VideoEdge NVR/ VideoEdge Hybrid version 4.3 with camera pack 4.3.0.1014 or later.
- American Dynamics VideoEdge NVR/ VideoEdge Hybrid version 4.4 core version.

Illustra 625 PTZ Camera Feature Plus

- American Dynamics VideoEdge NVR/ VideoEdge Hybrid version 4.3 with camera pack 4.3.0.1046 or later.
- American Dynamics VideoEdge NVR/ VideoEdge Hybrid version 4.4 will require a handler upgrade

Refer to the American Dynamics VideoEdge Camera Handler Release Notes for integration information with upcoming releases.

American Dynamics HDVR Integration

Illustra 625 PTZ Camera integrates with the following versions of American Dynamics HDVR

Illustra 625 PTZ Camera

- Version 2.1 and 2.2 of American Dynamics HDVR.

Illustra 625 PTZ Camera Feature Plus

- Version 2.2 of American Dynamics HDVR.

Illustra API

Illustra 625 PTZ supports Illustra API v3.0. Complete API documentation and specific details of i625PTZ implementation is available to American Dynamics partners.

ONVIF 2.2 Profile S Conformance

Illustra 625 PTZ is conformant with ONVIF 2.2 Profile S and has been tested with ONVIF Device Test Tool version 12.12.

ONVIF Authentication

Illustra 625 PTZ supports WS-UsernameToken for ONVIF authentication.

This authentication protocol requires that both communicating devices have synchronized their clocks within a 5 minutes tolerance window. The administrator needs to ensure that the camera time is configured prior to enabling ONVIF authentication.

ONVIF authentication is automatically disabled if the built-in “admin” user has the default “admin” password. To enable ONVIF authentication, the administrator must change the password of the built-in “admin” user.

ONVIF authentication can also be disabled via the Web GUI:

1. Select Advanced Settings from the Networking menu.
2. Select the Remote Access tab.

3. Deselect the ONVIF Discovery Mode check box to disable the feature.

Picture Settings

- On reboot the camera will return to the last “Save Picture Settings”
- On power reset the camera will return to the last “Save Picture Settings”
- If “Save Picture Settings” has never been used, the saved settings are equivalent to Defaults.
- It is recommended to “Save Picture Settings” at the end of commissioning so that these settings are preserved in case of a power cut.

Picture settings can be saved via the Web GUI:

1. Select Picture Settings from the View menu.
2. Select the Picture Settings tab.
3. Select Save to save and retain the current picture settings.

Power Cycling

When a user is performing a power cycle the power cable should be left unconnected for 20 seconds prior to re-connection. If the cable is connected too soon a failed boot may occur.

Patterns

The camera has a 15 minutes pattern timeout. Pattern recording will be cancelled after this time. When the camera is recording a pattern there will be limited functionality (e.g. no PTZ actions can be launched).

Time Zones

Time zones listed without cities are generic – these time zones have daylight saving disabled.

Freeze Frame

Freeze frame will only apply when moving to/from a preset or running a sequence. Freeze frame will not be used to go the start of a scan/pattern. In some instances, when zoom is applied to a preset, freeze frame may resume prior to a preset reaching full zoom set.

Web GUI

Web GUI Video Streaming

The Web GUI requires the installation of Apple Quicktime to stream video. Quicktime 7.0.0 or above is recommended.

Web GUI PTZ Controls

The Mouse wheel can be used to apply zoom, this operates at 1x increments; for quicker zoom the GUI Camera Controls should be used.

Set North Position

Before configuring PTZ camera settings such as presets, privacy zones, areas or patterns it is essential to first set the North position on the dome.

OSD

OSD has been disabled for all dynamic overlays including pattern recording progress bar. Only time and camera name are available in 1.0.0.x. Feature affects: Area, Set North and Pattern Recording.

The following OSD functions will be supported in the initial release:

- Name
- Time
- Text Attributes (Translucent option)

A future firmware release will add support for the following OSD functions:

- Dome Names
    - Area Name
    - Preset Name
    - Pattern Name
    - Alarm Name
- Status (displays the status of Zoom, Auto Iris and Auto Focus)
- Direction Indicators (displays pan-tilt degree position and North Position)Pattern Record Status Bar

Known Limitations and Issues

PRODUCT	
Description	**Suggested Work-Around**
This firmware update is not backwards compatible. Once the firmware version 1.0.2 has been installed it will not be possible to downgrade to firmware version 1.0.0 or 1.0.1.	None
Privacy zones - When drawing a privacy zone if you touch the border of the image, you lose control of the resize	Do not allow the zone to extend further than the draw area.
Scheduled Tasks do not run during BST (British Summer Time) change if set to run at specific changing time	N/A
Auto – Day night mode: Return to day mode. The camera may not return to day mode (color) under some lighting conditions, in particular at high zoom magnification.	Reduce zoom magnification or move the camera to a brighter scene temporarily to trigger day mode before returning to the desired location.
H264 encoding: H264 VBR Quality settings for Low and Lowest provide the same bit rate as Medium when the scene is complex or has high movement.	If greatly reducing bandwidth is desired regardless of scene complexity, a combination of reducing resolution and reducing H264 quality should be used rather than only reducing quality at high resolution. This will be addressed in a future firmware update.
Privacy Zones table for role 'user' provides a 'Delete' button when there is no delete facility available for 'user' role. The button performs no action.	N/A
Upgrade may result in high CPU fault being logged.	These faults can be safely ignored. Administrator should login to Current Faults Table to delete CPU Alarm message.
Illustra 625 PTZ Set Privacy Zone functionality freezes when a user double left clicks on the surveillance pane	User can refresh the page or click cancel to recover the live video
When using the web GUI, video does not start streaming automatically after drawing a Privacy Zone.	User must click Play button to start stream again
Factory defaulting the camera retains DNS information, when the user does not select retain network configuration	Administrator can edit/remove the DNS field information.
Factory defaulting the camera does not change status of IPv6 - If IPv6 is disabled prior to factory default this will remain disabled	Administrator can enable IPV6 manually, User can still search for the camera using IPV4 IP address.

PRODUCT	
Description	**Suggested Work-Around**
During PTZ movement's user may experience image oscillation on some part of the image for a small period (approx 5 seconds).	Depending on the scene, the camera may take up to 5 seconds to regain focus during PTZ movement resulting in portions of the image to appear oscillating
Translated user guides have not yet been updated to reflect changes in the new software release.	8200-0999-06 Configuration and User Guide in English has been updated to cover all features. Updated Configuration and User Guides for the languages listed will be released at a later date.
Camera without a MicroSD card inserted is not sending emails when SMTP has been enabled and an alarm triggered.	Insert MicroSD Card into Camera

Technical Tips

PRODUCT	
Description	**Suggested Work-Around**
North Position: The north position defines the absolute 0 degree pan reference. Changing the North position will change the location of Presets, Privacy Zones, Area and recorded patterns.	Before configuring PTZ camera settings such as presets, privacy zones, areas or patterns it is essential to first set the North position on the dome.

Contact Information

If you have any questions regarding these release notes, please contact American Dynamics Technical Services at:

Toll Free: 800-507-6268, Option 2 **International:** 561-912-6259, Option 2 **Alternative Number:** 800-392-2873

Fax: 450-444-2029 **Hours:** 08:00 – 20:00 EST

Email: adtechservices@tycoint.com **Website:** www.americandynamics.net

In Europe, Middle East and Africa, contact Technical Support at:

Toll Free: +800 CALLTYCO or +800-2255 8926 **Direct**: +31 475 352 722

Hours: 08:00 – 18:00 CET **Email:** tsp.emea.video.support@tycoint.com

Website: www.tycosecurityproductsemea.com **Website:** www.calltyco.com

Local Direct dial numbers:

UK	08701 238 787	**Bahrain**	800 04127
France	0800 90 79 72	**Greece**	00800 31 229 453
Spain	900 99 39 61	**Russia**	810 800 20 521 031
Germany	0800 1806 757	**Turkey**	00800 31 923 007
Italy	0800 874 091	**United Arab Emirates**	800 0310 7123
Belgium	0800 76 452	**Israel**	03 345 6868
Ireland	021 480 1122		

In Latin America and Caribbean, contact Technical Support at:

Southern Latin America
Contact: Cesar Cristal
Phone: +54-11-4711-8711
Cell: +54911-6452-7573
Email: ccristal@tycoint.com

Brazil
Contact: Mauro Altino
Phone: +55-11-3443-7232
Cell: +55-11-8998-9770
Email: maltino@tycoint.com

Northern Latin America & Caribbean
Contact: Hildebrando Duran
Phone: +57-1638-6278
Cell: +57-317668-9590
Email: hiduran@tycoint.com

Mexico
Contact: Marco Antonio Salguero
Phone: +52-55-5488-8092
Cell: +52-55-1473-4946
Email: msalguero@tycoint.com

In Asia Pacific, contact Technical Support at:

Toll Free: +800 CALLTYCO or +800-2255 8926 **Direct**: +86 21 60 23 0650

China Only Hotline: 400 671 1528 **India Only Hotline:** 1 800 1082 008

Hours: 08:00 – 17:00 CST **Email:** apac.support@tycoint.com

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